

REMARKS

Claim Rejections - 35 USC § 102

Claims 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferm et al (US 5,657,408) (Ferm). This rejection is respectfully traversed.

The present claimed invention is directed towards an integrated linear array of injection molded light-conductive pipes, each pipe comprising an input optical face and an output optical face connected by an elongated body of light-conductive material, where the pipes in the linear array are connected by integral alignment features formed during the injection molding of the light-conductive pipes (i.e., pipes and integral alignment features are formed by injecting, cooling and solidifying molten material in a light pipe mold that includes multiple elongated cavities, each having two optical end faces and cavity contours that form at least one integral light pipe alignment feature). Claim 20 has been amended to more specifically require that the integral alignment features project from the elongated bodies of the molded light-conductive pipes, and that the mold used to form the light pipes include cavity contours that form at least one integral light pipe alignment feature projecting from the elongated bodies of the light pipes, wherein the openings for injecting molten material into the cavities are located in the alignment feature cavity contours. Support for such amendment may be found, e.g., at page 8, lines 23-29, as well as the Figures and original claim 3.

As acknowledged by the Examiner, structure implied by the process steps in a product-by-process claim should be considered when assessing the patentability of such claims over the prior art. In the instant case, as the openings for injecting molten material are required to be distant from either optical end face of the mold, as well as be located in the alignment feature cavity contours, the formed alignment features projecting from the elongated bodies must also be distant from the input and output optical faces of the molded light pipe. This is clearly shown, e.g., in Applicant's Figures. While Applicant initially does not believe Ferm discloses an integrated linear array of molded light-conductive pipes with integral alignment features connecting the pipes in the linear array, the further feature with respect to the alignment feature projecting

from the elongated bodies of the molded light-conductive pipes is clearly not taught or disclosed. Note that the input and output faces referenced by the Examiner as the integral alignment feature do not project from the elongated body of optical waveguide elements 12, and further do not connect such separate elements, but rather at best simply define the fill factor for the light input areas as suggested at col. 5, lines 17-20. Further, col. 14 lines 1-4 discuss the fact that the input surfaces are actually spaced from each other by 10 microns, rather than function as alignment features that connect one waveguide to another. Finally, there is no support for the Examiner's contention that Ferm discloses stacking linear arrays in a faceplate configuration. Rather, the only manufacturing process actually disclosed in Ferm is a photolithographic process used to form the entire unit cell of Fig. 15. Forming molded linear arrays of integrated pipes, and then stacking such integrated linear arrays will of course result in a physically distinct structure than the photolithographic derived unit cells of Ferm. Accordingly, it is clear that Ferm does not anticipate the present claimed invention.

Claim Rejections - 35 USC § 103

Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferm in view of Border et al (US 6,441,077) (Border). This rejection is respectfully traversed for the reasons discussed above, as Border does not overcome the basic deficiencies of the Ferm reference with respect to the present claimed invention. Reconsideration is accordingly respectfully requested.

Process of making claim 8 has been amended similarly as claim 20 by incorporating the features of dependent claim 28 (and claim 28 has accordingly been cancelled). Accordingly, claims 8-14, 27 and 29 include essentially all the limitations of product claim 20. Rejoinder of such process of making claims upon allowance of elected product claim 20 is accordingly respectfully requested.

In view of the foregoing amendments and remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the Examiner is earnestly solicited. Should the Examiner believe any remaining issues may be resolved via a telephone interview, the Examiner is encouraged to contact Applicants' representative at the number below to discuss such issues.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.